



Animal Resource E-Mail Newsletter

SEPTEMBER 2007

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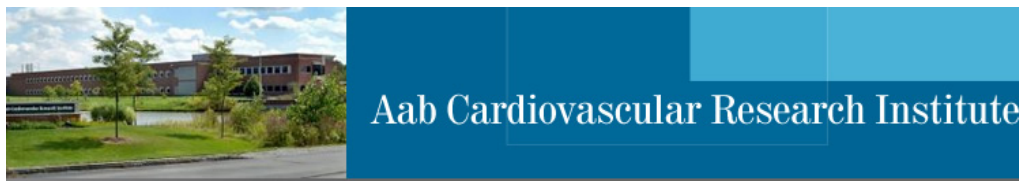
The University of Rochester is committed to maintaining the highest standards of care for animals used in research, education and training. Please follow the link for additional information about reporting animal welfare concerns and the responsibilities of the institution to respond to these concerns (<http://www.urmc.rochester.edu/ucar/animalconcerns.htm>).

Animal Resource
UCAR

Phone

AR 5-2651
UCAR 5-1693

We're on the Web!
<http://www.urmc.rochester.edu/vivarium/>
<http://www.urmc.rochester.edu/ucar/>



The University of Rochester Aab Cardiovascular Research Institute (CVRI) ribbon cutting occurred Tuesday, August 21 at 211 Bailey Road, which was formerly occupied by Wyeth-Lederle Vaccines and Pediatrics. More than 100 scientists, students and technicians will occupy the facility including cardiovascular research staff and fifteen researchers from Functional Genomics. The Institute includes 100,000 square feet of new and renovated laboratory and research space costing \$14 million above the purchase price. A new 15,000 square foot vivarium will house primarily mice in state-of-the-art, barrier maintained enclosures. All animal research programming will continue under the oversight of UCAR managed by the Animal Resource.

C-Section Rederivation - Protecting the Health of Our Research Rodents

While it is usually obvious when a research animal becomes ill, some pathogens can be present in a colony without causing symptoms. The damage they do may be by altering the immune system or the expression of certain genes. These insidious effects can wreak as much havoc on a research project as would sick or dead animals. For this reason the Animal Resource requires that rodents be obtained from approved commercial vendors if they are available from these sources. These rodents come to us with a defined health status which is verified on a regular basis through the sentinel program.

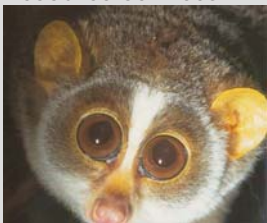
If rodents are not available from a commercial source, they may be obtained from non-routine vendors. Before arrival the DLAM veterinarians evaluate the health records of these animals. If they come from a colony with no history of pathogens, they are allowed to enter our clean quarantine room for quarantine and health testing prior to joining our established research colonies. If these animals come from a room with a history of a pathogen, they must be rederived before joining our resident population. The rederivation may be by embryo-transfer or C-section, and can occur at the vendor, at a commercial laboratory, or after the rodents arrive at this institution. DLAM requires rederivation of these animals because the traditional methods of pathogen elimination, such as "burn out" are no longer reliable in this day of genetically modified animals. Too many mice and rats have abnormal immune systems, sometimes unexpectedly, so their response when exposed to pathogens is not always the response that is seen in wild-type rodents.

<http://grants.nih.gov/grants/olaw/olaw.htm>



2nd Animal Resource Survey

Comments from the 390 Animal Resource survey respondents from 2005 resulted in many program changes including box charge for mice, bar code for inventory, on-line ordering and room scheduling and enhanced enrichment across species among many others. The 2nd Survey will be circulated Fall 2007. Please don't hesitate to contact Dr. Jeff Wyatt (jeff_wyatt@urmc.rochester.edu) if you would like to make any suggestions to improve Animal Resource services.



DLAM has offered C-section rederivation of rodents since 2001. The cost for this service is quite a bit less than the commercial vendors charge. To date, over 120 lines of mice and rats have been rederived. These animals originated with various pathogens, including ectoparasites, endoparasites, mouse hepatitis virus (MHV), mouse parvovirus (MPV), epizootic diarrhea of infant mice (EDIM) and Helicobacter. No pathogens have ever been identified in these rederived mice and rats at the end of their quarantine period.

The health status of research rodents can also be protected by maintaining some breeder animals in foundation colonies which experience minimal traffic and no exposure to animals that are being used in an experiment. Microisolator technology housing further protects rodents by providing them with a sterile environment in which to live. Cryopreservation of gametes or embryos off-site is another option.

Please contact one of the DLAM veterinarians if you wish to discuss rodent rederivations or the health of your research animals.

Why use Isoflurane over injectable anesthesia in rodents?

Respiratory depression and hypothermia are two of the major concerns during anesthesia of small rodents. Therefore, anesthetic regimens that result in rapid recovery and easy adjustment of depth of anesthesia are ideal. Injectable anesthesia does not meet these requirements as depth of anesthesia cannot easily be controlled and hypothermia secondary to prolonged recovery is common place. Isoflurane, an inhalant anesthetic which can be delivered to effect in oxygen using a precise vaporizer, is an excellent choice as recovery is rapid and depth of anesthesia can be adjusted at the turn of a knob. In addition, it has minimal effect on cardiopulmonary variables, and has minimal hepatic metabolism, biotransformation, and excretion. In terms of safety and survivability it is far superior to injectable anesthesia in transgenic mice. Several studies have shown that the level of isoflurane required to anesthetize mice is consistent across strains. This is not the case for ketamine combinations where different dosages can be required dependent on the strain or sex of the mouse easily resulting in overdosage.

DLAM has three complete rodent anesthesia machines for rent. They can be rented anywhere from 1 day to 1 week at a cost of \$20 for the 1st calendar day, and then \$5 for each consecutive calendar day up to a maximum of 5 days. A full reservoir of isoflurane and a full oxygen tank is included in the price. If you are interested in renting a machine please contact the DLAM office at x52651. Please note that the use of isoflurane needs to be described in your protocol prior to its use. If you have any further questions regarding the use of isoflurane, please do not hesitate to contact one of the DLAM veterinarians, we will be happy to respond to your questions.

10 Security Tips for Individuals Who Care for and/or Work with Laboratory Animals

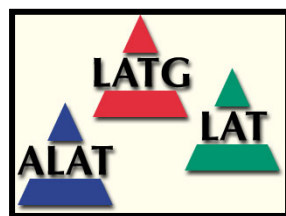
In order to increase the security of our animal facilities and laboratories, as well as ensure the safety of our animals, research data and personnel, the University of Rochester's Vivarium Security committee recommends the following:

1. Do not permit unauthorized or unknown persons in the laboratory or animal facility.

2. Make sure that cages and carriers used to transport animals are secured and covered.
3. Directly transport animals to and from facilities; never leave animals unattended during transport.
4. When transporting animals, avoid public corridors, areas and elevators that are not outlined in the UR transport policy.
5. Attach "Animal Transport" tags to all enclosures used to transport non-rodent USDA regulated animals (e.g. nonhuman primates, dogs, cats, pigs...).
6. Keep doors to laboratories in which animals are present closed; lock laboratory doors if leaving animals (e.g. mice) unattended. Never leave large and/or vocal animals (e.g. cats, dogs, sheep, pigs) unattended in the laboratory.
7. Display "Vehicular Animal Transport" tags on the dashboard of all vehicles (UR courier or private auto) used to transport research animals away from or between animal housing facilities and/or laboratories.
8. Report lost or stolen animal room keys to the Animal Resource office immediately.
9. The use of image/audio data capturing devices in areas where animals are housed, transported or used for research, testing or teaching requires authorization by the investigator and animal resource management.
10. Be aware of your surroundings at all times. In the event of suspicious activity of a non-urgent nature, contact Security at X5-3333; dial X-13 in an emergency.

\$\$ Per Diem Cost Saving Tip \$\$

Did you know that the mouse per diem charge (40.6 cents) applies to a cage of mice containing anywhere from one to five mice? The national average for mouse cage density is 3.5 mice per cage. With a U of R average of 2.7 mice per cage, you may consider increasing density up to five to stretch your grant dollars. Please remember that overcrowding (greater than 5 adults) is not permitted by NIH or U of R.



AALAS Certification Update: Glenda Shoemaker, RLATG, Nanette Alcott, LVT, RALAT and Katie Brock, LVT, RALAT

Terminating UCAR Protocols

UCAR notifies Principal Investigators when UCAR protocols are nearing their expiration date. Often Principal Investigators elect to terminate a protocol. Please make sure that you do not have any animals on the protocol that is being terminated. Submit an Animal Transfer Form to the Animal Resource Office to transfer the animals to an approved and active UCAR protocol. Destroy any extra cage cards that are associated with the terminating protocol. The Public Health Service (PHS) considers continuation of animal activities beyond the expiration date serious and a violation of the PHS Policy. Therefore UCAR must report this to PHS.